IN THE CLAIMS:

Please amend Claims 1, 5, 7, 8, 11, 15, 18, and 19 as follows:

1.   (currently amended)   A bad-sector search method, comprising:

a recording step whereby ~~while executing~~ when receiving a command that accesses a sector on a disk-shaped recording medium placed in a data recording device, an address of a sector where data reading is difficult is recorded in a memory;

a determining step for determining whether or not the data recording device is executing a command; and

a detecting step whereby if it is determined that the data recording device is not executing a command, the address of the sector is read from the memory to detect whether or not it is difficult to read data from each of surrounding sectors adjacent to the sector, the address of which has been read.

2.   (original)   A bad-sector search method according to Claim 1, wherein:

if a number of steps of error recovery procedures executed for data recorded in the sector exceeds a predetermined specified value, or if the data cannot be read out, said detecting step detects that data reading on the sector is difficult.

3.   (original)   A bad-sector search method according to Claim 1, wherein:

if a new command is not received within a given period of time after the data recording device completed the execution of the last command, said determining step determines that a command is not being executed.

4.   (original)   A bad-sector search method according to Claim 1, further comprising:

an interruption step for immediately interrupting the detecting step when the data recording device receives a command.

5.   (currently amended)   A bad-sector search method, comprising:

a bad sector recording step whereby ~~while executing~~ when receiving a command that accesses a sector on a disk-shaped recording medium placed in a data recording device, a bad sector is detected, and then an address of the bad sector is recorded in a memory;

a determining step for determining whether or not the data recording device is executing a command;

a detecting step whereby if it is determined that the data recording device is not executing a command, addresses of surrounding sectors adjacent to the bad sector, the address of which is recorded in the memory, are recorded in the memory, and then whether or not each of the surrounding sectors is a bad sector is detected; and

a bad-surrounding-sector recording step whereby ~~if the surrounding sector is not a bad sector, the address of the surrounding sector is deleted from the memory, and~~ if the surrounding sector is a bad sector, the address of the surrounding sector is recorded in the memory as a bad sector.

6.   (original)   A bad-sector search method according to Claim 5, wherein:

if the number of steps of error recovery procedures executed for data recorded in the surrounding sector exceeds a predetermined specified value, or if the data cannot be read out, the detecting step detects that the surrounding sector is a bad sector.

7.   (currently amended)   A bad-sector search method according to Claim 5, wherein:

said ~~search~~ detecting step further comprises processing that deletes an address of a sector, a search for which has already been completed, from the addresses of the surrounding sectors in the memory.

8.   (currently amended)   A bad-sector search method according to Claim 5, wherein:

said ~~search~~ detecting further comprises processing whereby focusing on the two bad sectors adjacent to each other, each address of surrounding sectors adjacent to one bad sector is mutually compared with each address of surrounding sectors adjacent to the other bad sector, and one of duplicated surrounding sectors is deleted from the memory.

9. (original)   A bad-sector search method according to Claim 5, wherein:

an interruption step for immediately interrupting the detecting step when the data recording device receives a command.

10. (original)   A bad-sector search method according to Claim 5, further comprising:

a step for recording history information about an interrupted search for a bad sector in the memory,

wherein the detecting step is executed according to the history information recorded in the memory.

11. (currently amended)   A data recording device, comprising:

recording means whereby ~~while executing~~ when receiving a command that accesses a sector on a disk-shaped recording medium, an address of a sector where data reading is difficult is recorded in a memory;

determining means for determining whether or not a command is being executed; and

detecting means whereby if it is determined that the command is not being executed, the address of the sector is read from the memory to detect whether or not it is difficult to read data from each of surrounding sectors adjacent to the sector, the address of which has been read.

12. (original)   A data recording device according to Claim 11, wherein:

if the number of steps of error recovery procedures executed for data recorded in the sector exceeds a predetermined specified value, or if the data cannot be read out, said detecting means detects that data reading on the sector is difficult.

13. (original)   A data recording device according to Claim 11, wherein:

if a new command is not received within a given period of time after the execution of the last command was completed, said determining means determines that a command is not being executed.

14. (original) A data recording device according to Claim 11, further comprising:

interruption means whereby on receipt of a command, operation of the detecting means is immediately interrupted.

15. (currently amended) A data recording device, comprising:

bad sector recording means whereby ~~while executing~~ when receiving a command that accesses a sector on a disk-shaped recording medium, a bad sector is detected, and then an address of the bad sector is recorded in a memory;

command determining means for determining whether or not a command is being executed;

surrounding sector recording means whereby addresses of surrounding sectors adjacent to the bad sector, the address of which is recorded in the memory, is recorded in the memory;

bad-surrounding-sector detecting means for detecting whether or not each of the surrounding sectors is a bad sector; and

bad-surrounding-sector recording means whereby ~~if the surrounding sector is not a bad sector, the address of the surrounding sector is deleted from the memory, and~~ if the surrounding sector is a bad sector, the address of the surrounding sector is recorded in the memory as a bad sector.

16. (original) A data recording device according to Claim 15, further comprising:

processing that deletes an address of a sector, a search for which has already been completed, from the addresses of the surrounding sectors recorded in the memory by the surrounding sector recording means.

17. (original) A data recording device according to Claim 15, further comprising:

means whereby focusing on the two bad sectors adjacent to each other, each address of surrounding sectors adjacent to one bad sector is mutually compared with each address of surrounding sectors adjacent to the other bad sector, and one of duplicated surrounding sectors is deleted from the memory.

18.   (currently amended)   A program that permits a computer to realize functions of:

~~while executing~~ when receiving a command that accesses a sector on a disk-shaped recording medium placed in a data recording device, recording in a memory an address of a sector where data reading is difficult;

determining whether or not the data recording device is executing a command; and

if it is determined that the data recording device is not executing a command, reading the address of the sector from the memory to detect whether or not it is difficult to read data from each of surrounding sectors adjacent to the sector, the address of which has been read.

19.   (currently amended)   A program that permits a computer to realize functions of:

~~while executing~~ when receiving a command that accesses a sector on a disk-shaped recording medium placed in a data recording device, detecting a bad sector, and then recording an address of the bad sector in a memory;

determining whether or not the data recording device is executing a command;

recording, in the memory, addresses of surrounding sectors adjacent to the bad sector, the address of which is recorded in the memory;

detecting whether or not each of the surrounding sectors is a bad sector; and

~~if the surrounding sector is not a bad sector, deleting the address of the surrounding sector from the memory, and~~ if the surrounding sector is a bad sector, recording the address of the surrounding sector in the memory as a bad sector.